

What Is Claimed Is:

1 1. In an adaptive speed control system for
2 a vehicle, a method for controlling vehicle
3 deceleration, the method comprising:

4 determining a speed of the vehicle; and
5 setting a maximum allowed vehicle
6 deceleration based on the vehicle speed determined.

1 2. The method of claim 1 wherein setting a
2 maximum allowed vehicle deceleration based on the
3 vehicle speed includes adjusting the maximum allowed
4 vehicle deceleration in an inverse relationship to the
5 vehicle speed.

1 2A. The method of claim 2 wherein adjusting
2 the maximum allowed vehicle deceleration comprises
3 decreasing the maximum allowed vehicle deceleration as
4 the vehicle speed increases.

1 3A. The method of claim 2 wherein adjusting
2 the maximum allowed vehicle deceleration comprises
3 increasing the maximum allowed vehicle deceleration as
4 the vehicle speed decreases.

1 5. The method of claim 2 wherein the
2 maximum allowed vehicle deceleration is capable of
3 varying continuously.

1 6. The method of claim 5 wherein the
2 maximum allowed vehicle deceleration is capable of
3 varying in a range between about 0.2 g and about
4 0.3 g.

1 ~~6~~¹. The method of claim ~~2~~¹ wherein the
2 maximum allowed vehicle deceleration is an exponential
3 function of the vehicle speed.

1 ~~7~~⁶. The method of claim ~~7~~⁶ wherein the
2 maximum allowed vehicle deceleration is defined by the
3 equation:

4
$$\text{MAXDECEL} = 0.2 + 160 / (\text{VEHSPD} + 40)^2,$$

5 where MAXDECEL is the maximum allowed vehicle
6 deceleration, and VEHSPD is the vehicle speed.

1 9. In an adaptive speed control system for
2 a vehicle, a system for controlling vehicle
3 deceleration, the system comprising:

4 a receiver capable of receiving an input
5 signal indicative of a speed of the vehicle; and

6 a controller capable of setting a maximum
7 allowed vehicle deceleration based on the vehicle
8 speed.

1 10. The system of claim 9 wherein, to set a
2 maximum allowed vehicle deceleration based on the

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3 vehicle speed, the controller is capable of adjusting
4 the maximum allowed vehicle deceleration in an inverse
5 relationship to the vehicle speed.

1 11. The system of claim 10 wherein, to
2 adjust the maximum allowed vehicle deceleration, the
3 controller is capable of decreasing the maximum
4 allowed vehicle deceleration as the vehicle speed
5 increases.

1 12. The system of claim 10 wherein, to
2 adjust the maximum allowed vehicle deceleration, the
3 controller is capable of increasing the maximum
4 allowed vehicle deceleration as the vehicle speed
5 decreases.

1 13. The system of claim 10 wherein the
2 maximum allowed vehicle deceleration is capable of
3 varying continuously.

1 14. The system of claim 13 wherein the
2 maximum allowed vehicle deceleration is capable of
3 varying in a range between about 0.2 g and about
4 0.3 g.

1 ¹³~~15~~. The system of claim ⁸~~10~~ wherein the
2 maximum allowed vehicle deceleration is an exponential
3 function of the vehicle speed.

14 13
1 16. The system of claim 15 wherein the
2 maximum allowed vehicle deceleration is defined by the
3 equation:

4
$$\text{MAXDECEL} = 0.2 + 160/(\text{VEHSPD} + 40)^2,$$

5 where MAXDECEL is the maximum allowed vehicle
6 deceleration, and VEHSPD is the vehicle speed.